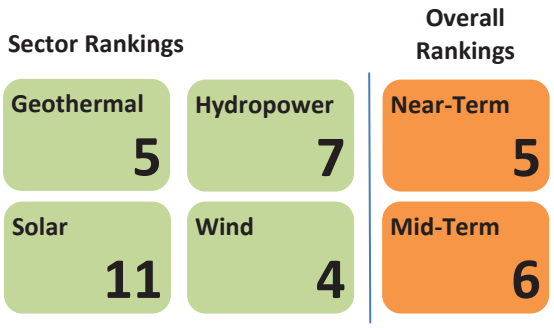
Mexico

Type: Large Market; Small Market Share

Ongoing energy sector reforms make projecting renewable energy export to Mexico challenging. However, based on Mexico's proximity to the United States, ITA notes considerable upside export potential. Mexico's proximity to the United States and its strong renewable energy resource base make it an appealing market for many American exporters. U.S. firms are encouraged to participate in the Mexican market, working with local colleagues to both shape the new regulatory environment and benefit from an important first-mover advantage.



Mexico is key destination for U.S. renewable energy exports already, ranking 5th on ITA's list of top export markets through 2016. It is in the top 11 markets for each of the four technology subsectors covered in the report. Exporters are often closely connected with firms on the other side of the boarder, with renewable energy goods typically crossing the border several times before they become finished products.

Mexico falls to a disappointing 11th on ITA's list of medium-term export markets. However, because of Mexico's proximity to the United States and its world-class wind, solar, and geothermal potential, ITA notes significant upside potential for investment. Should Mexico develop a strong and thriving clean energy market, it is likely that no other market would support more U.S. exports. Accomplishing this goal would improve the region's energy security, help address climate change – a priority for the Mexican Government.

Overview of the Renewable Energy Market

ITA's outlook for the Mexican renewable energy market has improved since last year due to the widespread and ongoing energy reforms passed into law in August 2014. Although the reform package was largely focused on PEMEX, Mexico's state-run oil company, and was designed to facilitate foreign investment in unconventional oil and gas development, the law should positively impact Mexico's entire power sector, including renewables, when fully implemented in 2016.

The law, which was passed as a series of amendments, was designed to liberalize the electricity generation market; open future development to private firms; and create competition between energy producers. Previously, the majority of Mexico's electricity was generated by the Federal Electricity Commission (CFE), Mexico's state-owned utility company. The reform package created an independent grid operator (CENACE) who controls a new, wholesale market and enables customers to purchase power directly from producers, creating an independent power producer (IPP) market for the first time in Mexico.

The reforms also mandate the creation of a clean energy certification scheme – to be administered by Mexico's Energy Regulatory Commission (CRE) – as the primary mechanism for encouraging the development of clean energy capacity, though the overall effectiveness of this program will depend on details that have yet to be announced.

Exporters are highly encouraged to monitor developments of the energy reform effort closely for opportunities to position themselves for success in the market, as early adopters to the reform regulations may be able to capture new opportunities. In particular, off-grid or roof-mounted solar development appears far more likely after the reforms – a technology that could support significant U.S. exports.

Further buttressing Mexico's clean energy development is the country's "General Law on Climate Change" enacted in June 2012. The law affirmed Mexico's target to increase its electricity generated from clean energy

sources to 35 percent by 2024; and set a national goal to reduce greenhouse gas emissions by 30 percent by the end of the decade.

Partly as a result of these laws, investment in Mexico's renewable energy sector has increased sharply, rising from just $532 million in 2011 to $2.4 billion in 2014. Most international investment in Mexico's renewable energy market has historically supported wind development, but solar, small hydropower, and geothermal firms have also benefited.

The continued investment in the sector indicates that global financiers believe that future development of Mexico's renewable energy market is expected, despite ongoing policy changes. While the reform package should allow private and public generators to compete for market share in the power sector, the Mexican Government has not finalized how the new contract schemes will function. Until details are released, it is unclear how renewable energy projects will fare vis-à-vis other fossil fuel projects, or between those developed by CFE and those financed by third-party investors.

The forthcoming decisions of Mexico's energy reform will thus greatly impact the competitiveness of different clean energy technologies. Most industry analysts believe that wind power will continue to dominate the renewable energy market in Mexico regardless of changes to regulation. But greater opportunities for consumers to produce their own power may create additional solar opportunities, particularly as the price of solar continues to fall. Over the medium-term, ITA expects some hydropower and geothermal development, particularly after a geothermal law was enacted in July 2014.

Challenges and Barriers to Renewable Energy Exports

Many of the challenges associated with the Mexican market impact U.S. suppliers in the same manner as suppliers from other markets – namely, an unclear and changing regulatory environment, a reduction in federal government spending on the sector, and a national focus on oil and gas development, which may change with falling fossil fuel prices.

To date, almost all renewable energy development was either approved or purchased directly by the Mexican Government. As a result, negotiating power resided almost exclusively in the hands of the government and prices offered to developers were often far below those offered in other markets, rendering Mexico an unattractive market for most clean energy developers.[61]

As the market evolves and the influence of the Mexican Government declines, opportunities for developers and investors to considerable solar potential in the North, wind potential in Oaxaca and Baja California, and geothermal potential throughout the country.

Importantly, it is the policies that are created and institutionalized today that will drive investment decisions for years to come. Throughout the reform process, direct interaction between U.S. companies and the Mexican authorities is critical.

Opportunities for U.S. Companies

Mexico's proximity to the United States means that most companies that manufacture domestically, whether U.S. headquartered or not, will export from their U.S. facilities to projects in Mexico. This presents a unique opportunity that should not be underestimated.

Wind

ITA expects wind energy to be the dominant player in Mexico's renewable energy market for the foreseeable future. Wind projects continue to command a large portion of clean energy investment in Mexico, attracting over $1 billion alone last year, nearly half of total clean energy investment within the country. The Mexican Wind Power Association, CFE and SENER announced in January investments for $14 billion by 2018, an increase in almost 7,000 MW for a total of 9,500 MW of installed wind energy.

Mexico currently lacks a full wind supply chain, indicating that any future development will require imports. Many component parts will be shipped from the United States if a foreign turbine manufacturer ultimately supplies a project. As such, Mexico ranks fourth on ITA's list of top wind export markets through 2016.

Solar

Mexico's solar industry remains in its infancy. ITA expects the industry to emerge over the next six years, installing 613 MW of new capacity, primarily through distributed PV. The market is already valued at $2.3 billion, and investment should increase once the new energy reforms are implemented. In fact, falling solar prices and high capacity factors should make the industry far more competitive going forward and for

consumers located in remote areas, could become the energy source of choice.

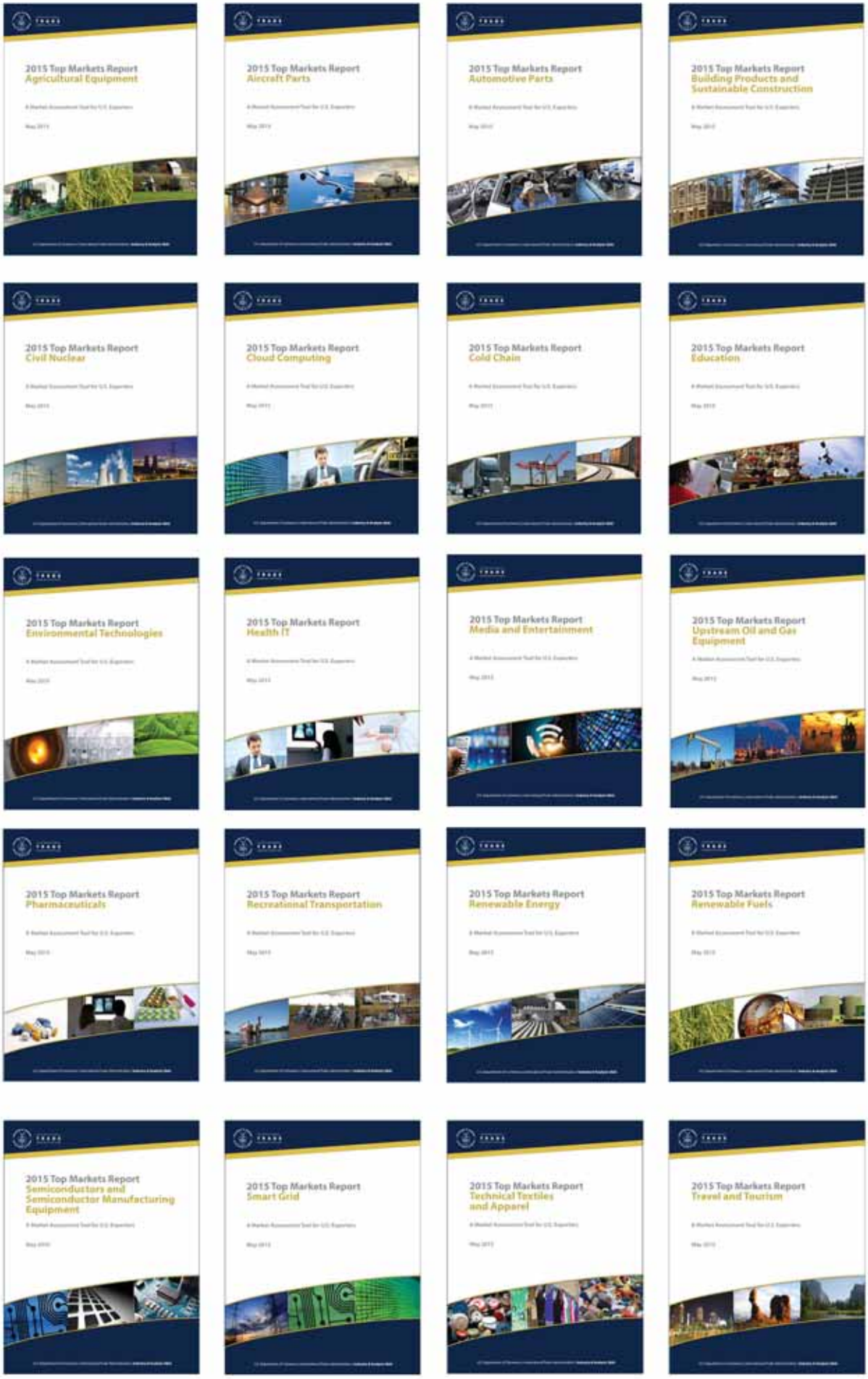
Geothermal

2014 was a notable year for the geothermal industry in Mexico, as new regulations were signed by President Pena Nieto. A framework is now in place to facilitate the issuance of permits for site study, as well as concessions for exploration and development of geothermal resources. In addition, Mexico's Ministry of Energy (SENER) recently announced that it has partnered with Nacional Financiers and the Inter-American Development Bank to provide risk mitigation and financing for private geothermal energy projects.

ITA projects U.S. exporters will capture nearly two-thirds of Mexico's geothermal imports. Several U.S. firms are active in the market already, and benefit from Mexico's incomplete supply chain. Opportunities are likely to include operation and management, as well as engineering and drilling services.

Hydropower

Development in the hydropower sector will likely be focused on the small hydro industry, where U.S. exporters may find opportunities providing environmental consulting and engineering services to a relatively small and stagnant industry. In the medium-term, ITA expects some larger hydropower projects to come online, although U.S. exporters will only marginally benefit from this development, capturing less than two percent of the import market.



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